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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,441	06/11/2001	Mohammed Javed Absar	851663.424US	8038

7590 06/29/2005

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EXAMINER	
FLANDERS, ANDREW C	
ART UNIT	**PAPER NUMBER**
2644	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/830,441	ABSAR ET AL.	
	Examiner	Art Unit	
	Andrew C. Flanders	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,12,13,23 and 24* is/are rejected.

7)☒ Claim(s) *3-11,14-22,25 and 26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments, see pages 7 and 8 of the remarks section filed 16 May 2005, with respect to Claims 1 – 26 have been fully considered and are persuasive. The rejection of Claims 1 – 26 have been withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paulos (U.S. Patent 6,208,671) in view of Muwafi (U.S. Patent 5,787,025).

Regarding **Claims 1, 12 and 23**, Paulos discloses:

A method of coding digital audio data (abstract) comprising:

a transform encoding process having plural levels of computation precision (i.e. sample rate conversion; abstract; sample rate conversion inherently takes one digital signal which has been previously encoded at a given sample rate and converts it into a second, different sample rate), wherein the transform encoding process includes:

a first computation stage involving arithmetic operations in transforming the digital audio signal data into intermediate audio data; using a first level of computational

precision (i.e. a compact disc recording with a 48kHz sample rate; col. 1 lines 15 – 25, a compact disc recording with a 48kHz sampling rate inherently has had audio data transformed from the analog domain into the digital domain using a sampling process);

a second computation stage involving arithmetic operations in transforming the intermediate audio data into coded audio data using a second level of computation precision different than the first level of computational precision (i.e. a sample rate converter converts a digital signal having a first sample rate to a substantially similar digital signal having a second sample rate; col. 1 lines 12 – 15);

Paulos doesn't explicitly disclose wherein the transform encoding process is in accordance with the AC-3 Digital Audio Compression Standard or implementing this process on a fixed point digital signal processor.

However, Paulos discloses that AC-3 audio may have sample rates of 44.1 kHz; col. 1 lines 20 - 25. It would have been obvious to one of ordinary skill in the art at the time of the invention to use Paulos' sample rate converter to convert the CD audio at 48 kHz into AC-3 audio at 44.1 kHz. One would have been motivated to do so to allow the seamless processing of two digital signals operating a two different sampling rates; Paulos col. 1 lines 15 – 17.

Furthermore, the modification of Paulos does not explicitly disclose implementing this process on a fixed point digital signal processor.

Muwafi discloses implementing this process on a fixed point digital signal processor (i.e. a signal processing circuit for performing single and double precision

operations; col. 1 lines 5 –15; in which the invention is desirably implemented in a DSP for use in communications operations which received digitized audio; col. 3 lines 1 – 7).

It would have been obvious to one of ordinary skill in the art to implement the modification of Paulo on a digital signal processor such as the one disclosed by Muwafi. One would have been motivated to do so to more efficiently processes the audio signals; see Muwafi col. 3 lines 36 – 53.

Regarding **Claims 2, 13 and 24**, in addition to the elements stated above regarding claims 1 , 12 and 23, Muwafi discloses:

wherein the digital signal processor comprises a 16-bit digital signal processor which is capable of single (16-bit) precision computations and double (32-bit) computations (i.e. the circuit operates in single or double precision mode; col. 1 lines 5 – 15).

Allowable Subject Matter

Claims 3 – 11, 14 – 22, and 25 - 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Flanders whose telephone number is (571) 272-7516. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

acf

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